Status of Activities Related to Denka Performance Elastomer, LLC (DPE)

Update Briefing

January 9, 2018

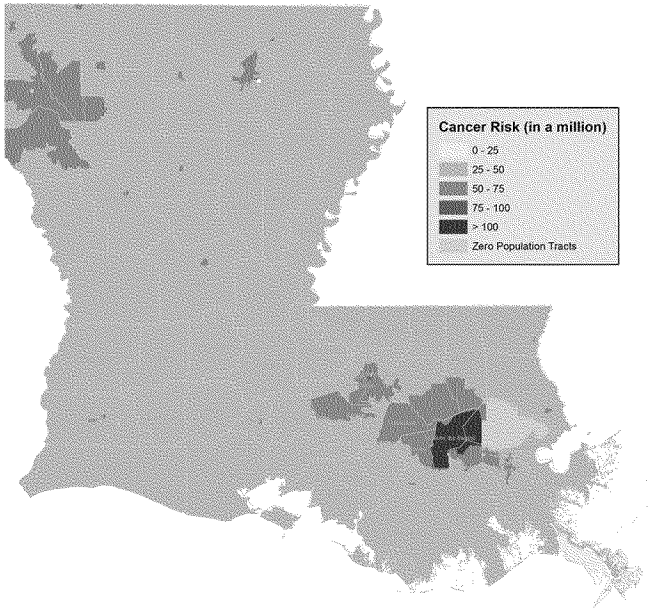
Purpose and Outline

- **Purpose:** To present an update on OAQPS, OECA, ORD, Region 6, and Louisiana Department of Environmental Quality (LDEQ) activities related to chloroprene emissions from the Denka Performance Elastomer, LLC (DPE) facility.

- **Outline:**
  - Background
  - Monitoring Activities
  - Current Activities at Denka
  - IRIS Request for Correction
  - Community Response and Inquiries
  - Upcoming Activities and Next Steps

Background

- The 2011 National Air Toxics Assessment, released in December 2015, estimated cancer risks in LaPlace, LA of 800-in-1 million at the census tract level and 1,400-in-1 million at the census block.
- The risks are from emissions of chloroprene, which is a chemical used in the production of neoprene, and is emitted by the Denka Performance Elastomers, LLC (DPE) facility.



- The DPE (formerly DuPont) facility in LaPlace, LA has emitted chloroprene since 1969.
- Since 2010, it consistently emitted between 120 and 130 tons per year, which is within its permitted limits.
- DPE is the only emitter of chloroprene in the area and is the only producer of neoprene in the United States.

Additional Background

- The DPE facility went through the Residual Risk and Technology review regulatory process in 2008. EPA did not estimate cancer risks for chloroprene at that time because chloroprene did not have a unit risk estimate (URE). The IRIS URE was published in 2010.
- Since summer 2015, OAQPS, OECA, Region 6, and LDEQ have been actively working with DPE to monitor and reduce chloroprene emissions from the facility.
- In January 2017, DPE entered into an Administrative Order on Consent (AOC) with LDEQ to implement emission reduction measures.
- DPE estimates emissions reductions of 85% once all controls are in place and operational, as designated by the AOC.

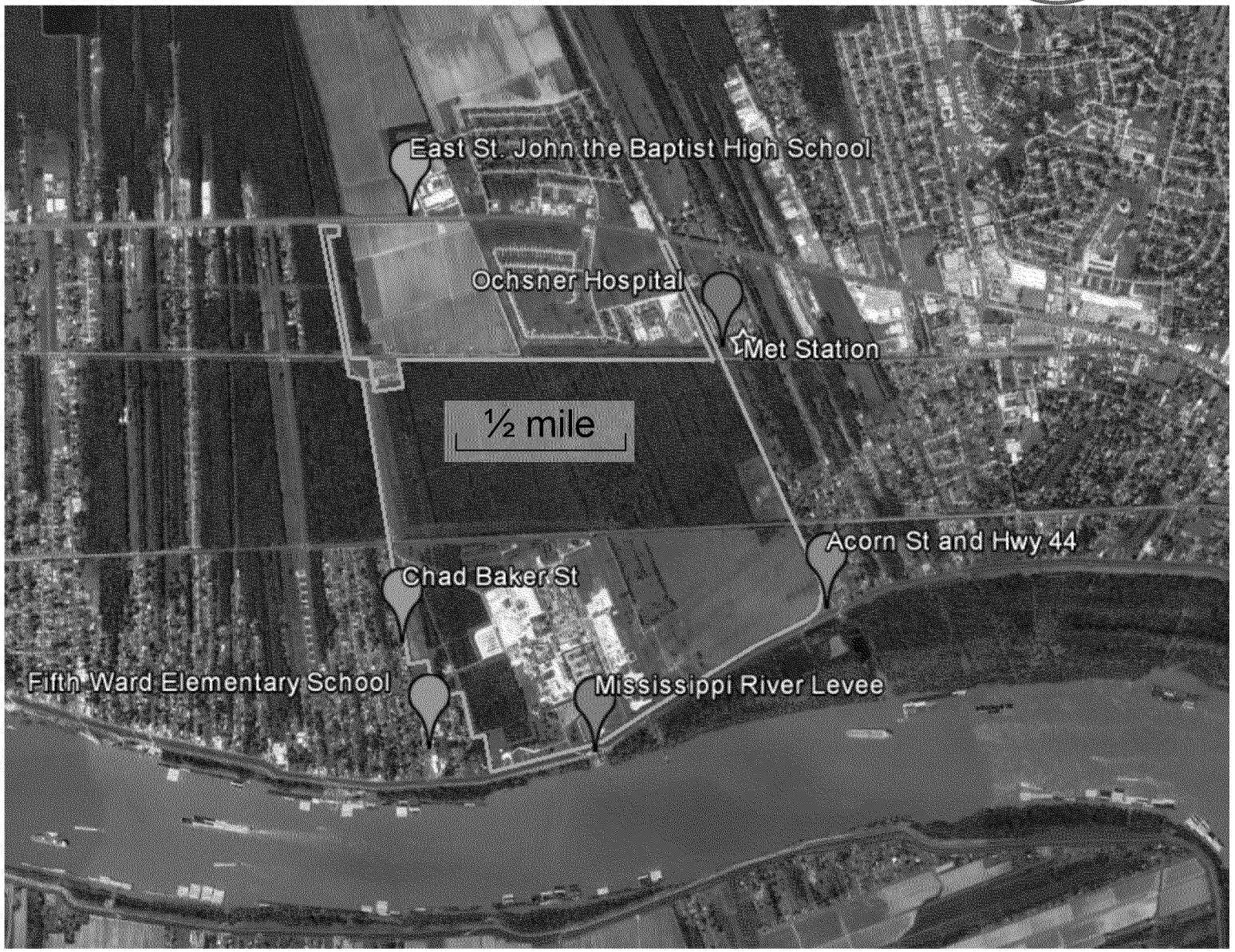
Chloroprene Health Value – Background

- IRIS assessment for chloroprene in 2010 found chloroprene to be a likely human carcinogen (with a high degree of confidence) and established a unit risk estimate (URE).
  - Using the IRIS URE, an individual exposed to an air concentration of 0.2 µg/m^3 over a lifetime would experience a lifetime cancer risk of 100-in-1 million.

- DuPont (previous owners of LaPlace facility) submitted comments during multiple review stages disagreeing with EPA's conclusions of carcinogenicity. The independent peer reviewers unanimously agreed with EPA's conclusions.

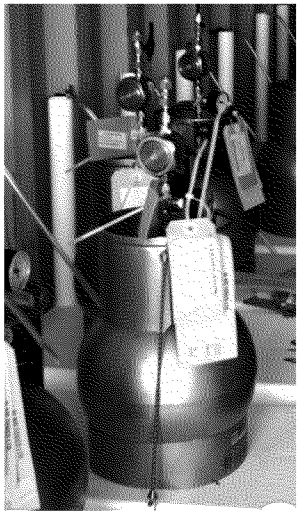
- Since the URE was not available until 2010, previous NATAs and RTR assessments did not assess cancer risks from chloroprene. The 2011 NATA (most recent) did use the URE for chloroprene. The 2008 RTR for neoprene production did not.

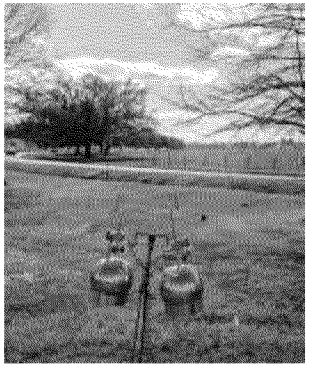
EPA Monitoring Locations



EPA Ambient Monitoring

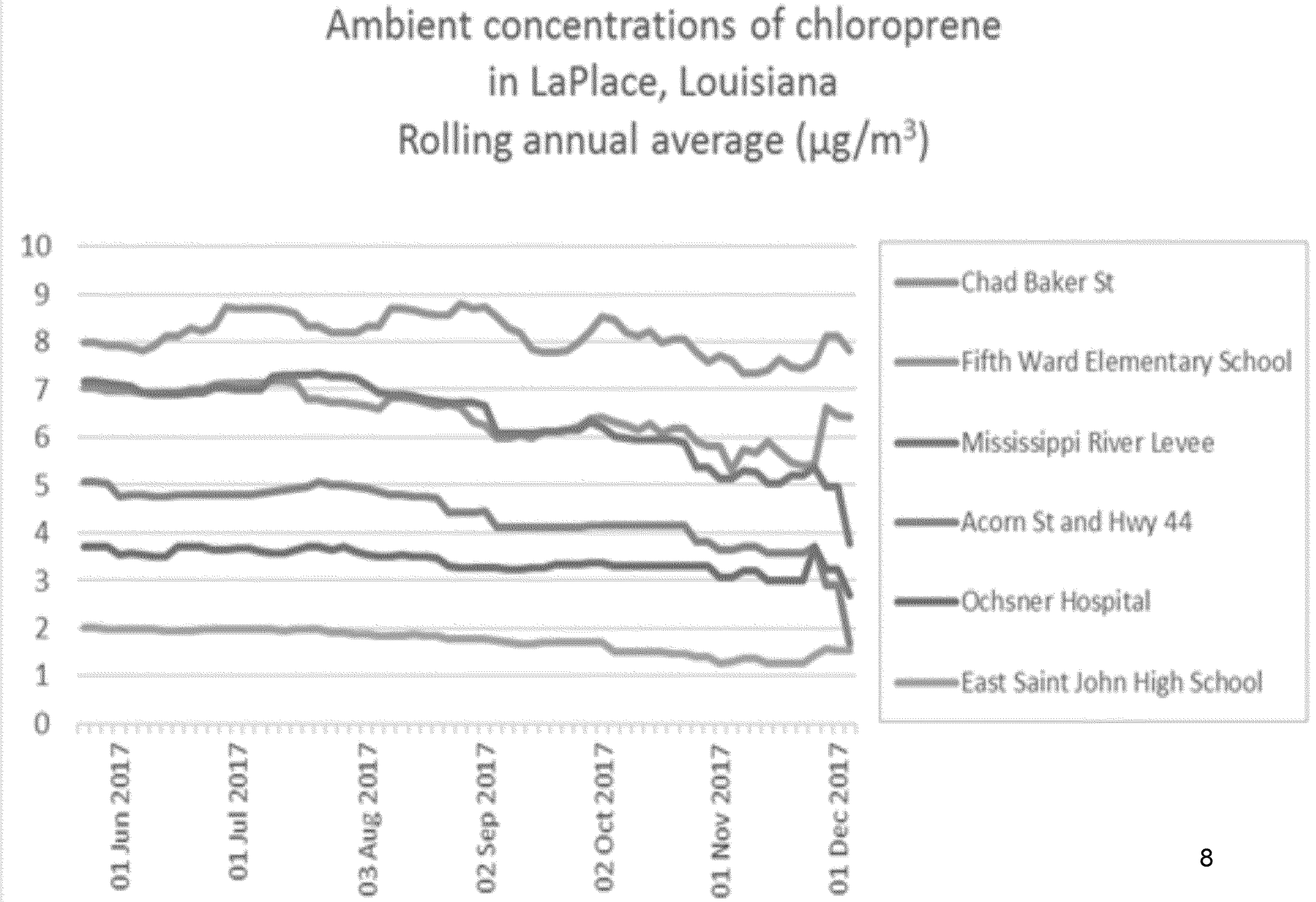
- Since May 2016, EPA has collected ambient air monitoring data for chloroprene in the LaPlace neighborhoods surrounding the DPE facility.
  - 24-hour samples, every 3 days at 6 locations
  - All data publically available on Region 6 website
- Main trend seen is higher concentrations when wind speeds are lower.
- OAR has committed to continuing the ambient air monitoring plan through December 2018, contingent upon final approved budgets for FY 2018 and FY 2019. Current funds extend to April 2018.



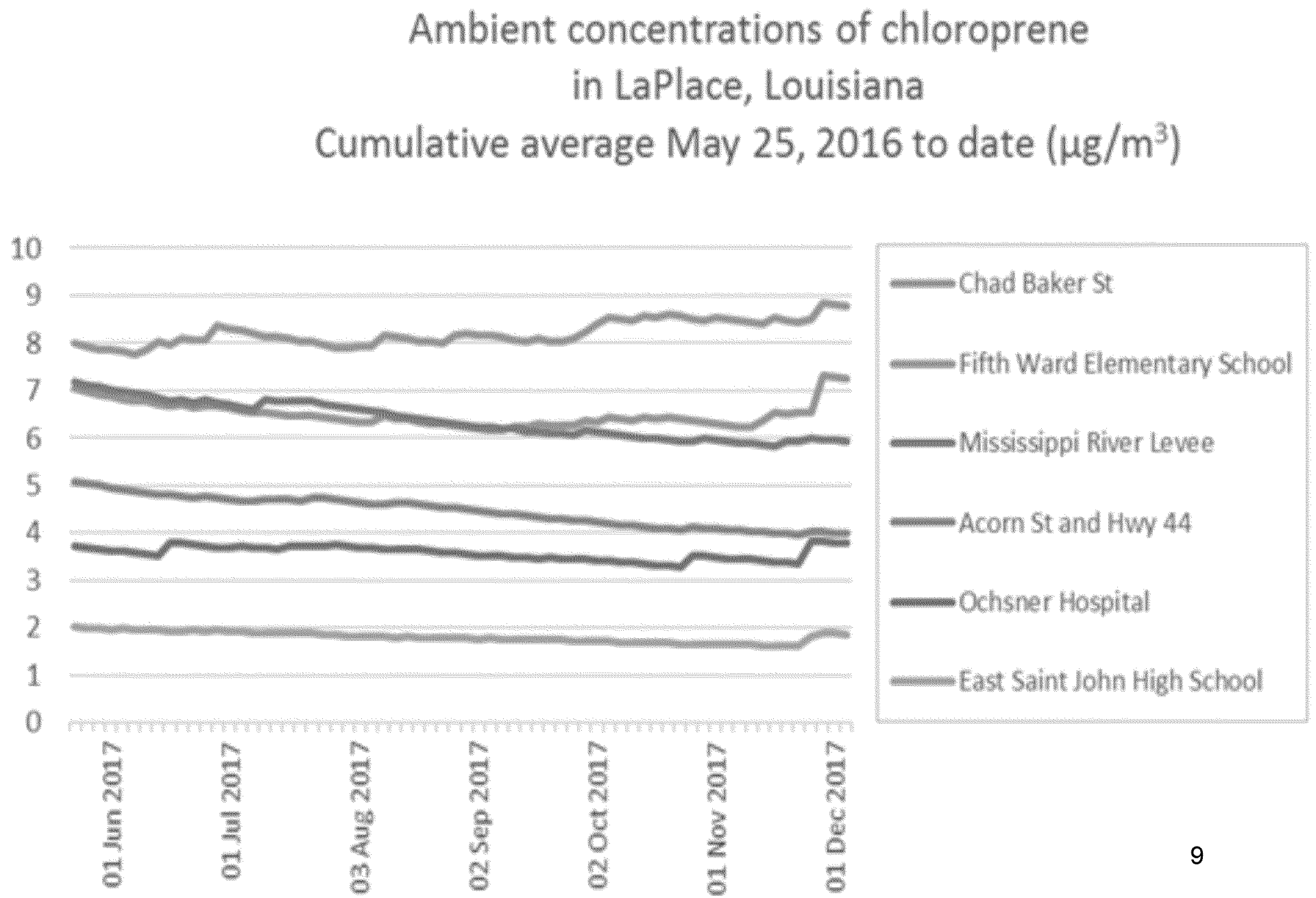


Monitor at Acorn & 44

Ambient Monitoring Trends – Thru Dec 4, 2017



Ambient Monitoring Trends – Thru Dec 4, 2017



Activities at DPE

LDEQ Administrative Order on Consent (AOC):

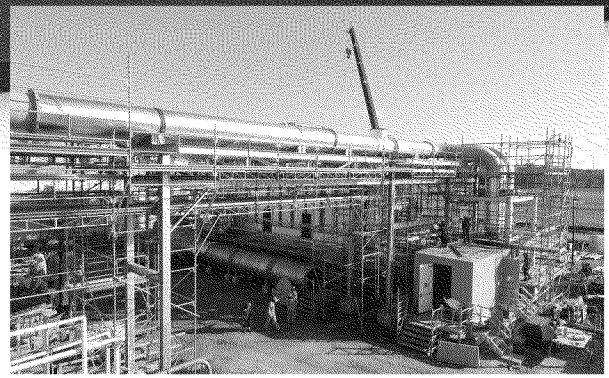
- DPE entered into an AOC with LDEQ on January 6, 2017.
- The order requires DPE to install a regenerative thermal oxidizer (RTO) and several other control measures.
- Installation of all control measures was completed by December 31, 2017.

EPA National Enforcement Investigations Center (NEIC):

- Separate from the AOC, NEIC and Region 6 conducted a CAA inspection of the facility in October 2016.

- The enforcement team, including DOJ, Region 6, NEIC, OECA, and LDEQ are

Administrative Order on Consent (AOC) Details


Installation of RTO at DPE

- DPE entered into an Administrative Order on Consent (AOC) with LDEQ on January 6, 2017. This order requires DPE to:
  - Install a regenerative thermal oxidizer (RTO) – the most effective measure,
  - Route specified monomer emissions to the hydrochloric acid production furnace (HAPF),
  - Install a vacuum pump and brine condenser on the CD refining column,
  - Install a brine condenser on the Poly Kettles Vent, and
  - Conduct ambient monitoring for 6 months after startup of the RTO.

- All control measures were installed by December 31, 2017 per the order.
  - RTO started-up on December 18, 2017.

- DPE estimates emissions will be reduced by 85% once all controls are operational, as designated by the AOC.

IRIS – Request for Correction (RFC)

- DPE agreed to the AOC while also announcing they were going to pursue changes to the IRIS assessment.

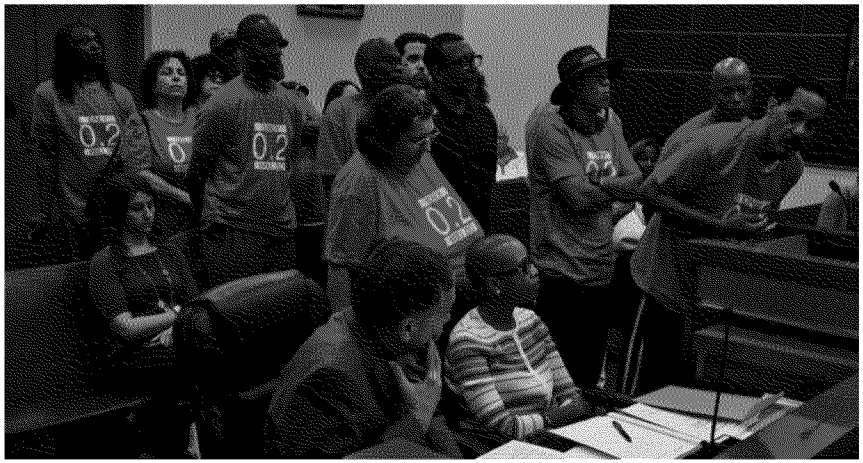
- On June 26, 2017, DPE submitted an RFC to OEI under the Information Quality Act. EPA had 90 days to respond.
  - DPE contends that the EPA conclusions about cancer classification, mutagenicity, and cancer and noncancer potency were incorrect and requests withdrawal of the IRIS assessment and replacement with consideration of new science.

  - ORD, with ATSDR, is evaluating the new science and developing a response that will be shared with OAQPS and Region 6.

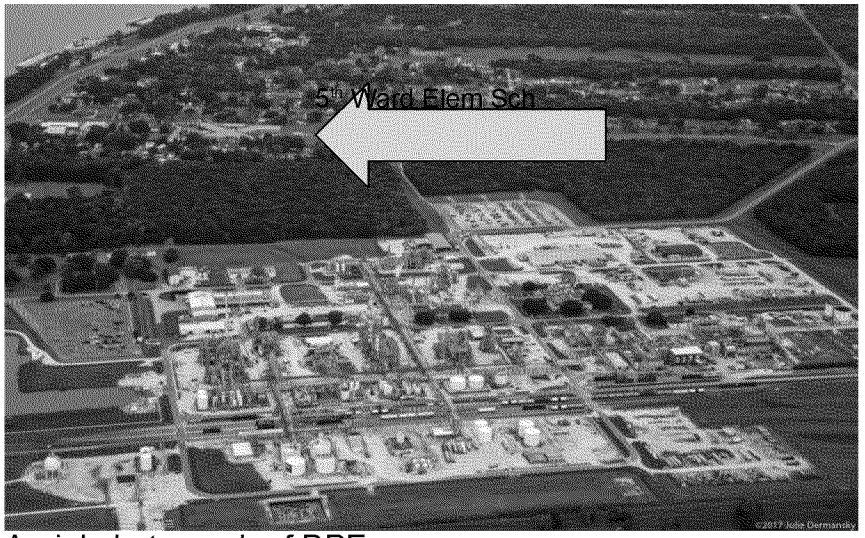
  - DPE met with ORD/OEI/OGC on October 30, 2017 to present their position. This meeting reset the 90-day response period to the end of January 2018. EPA is on track to respond within this time frame.

Community Response

- Community is active and organized
- Louisiana Environmental Action Network (LEAN) involved with community
- EPA working closely with Region 6 and LDEQ, including attending 2 local meetings (July 2016 and July 2017)
- August 2017 – LDEQ fact sheet addressing parents' concerns about sending children to the elementary school
- *Citizen lawsuit v. DPE*



Citizens at a Parish Meeting in LaPlace, LA



Aerial photograph of DPE

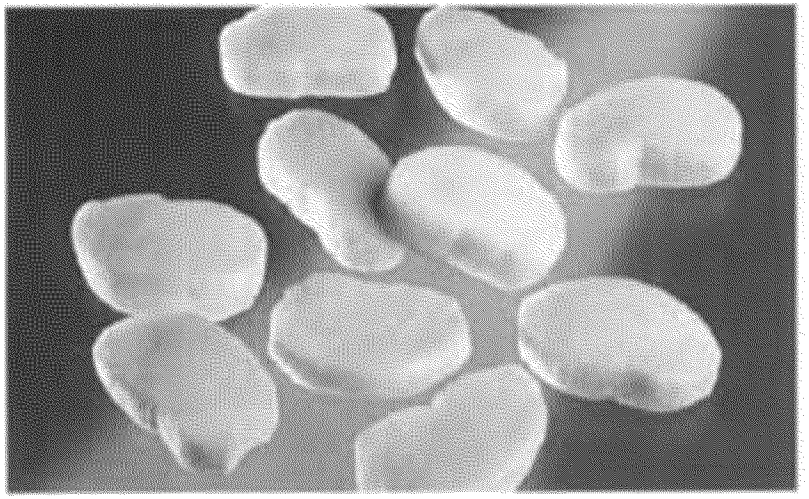
Press and Other Inquiries

- Requests about IRIS process and chloroprene:
  - October 24, 2017, letter from Senators Cassidy and Kennedy and Congressmen Graves and Higgins
  - October 12, 2017, letter from House Committee on Science, Space, and Technology Chair Lamar Smith and Andy Biggs
- CNN article and video – October 20, 2017
- Letter from Univ. of Colorado professor requesting EPA use Section 303 authority – November 2017
- Continuing local news coverage
- Louisiana Environmental Action Network (LEAN) calls to Region 6

Upcoming Activities and Next Steps

- December 2017 – RTO installation and other interim control measures completed
- December 2017 – Begin developing messages and communications strategy
- January 2018 – ORD will respond via OEI to RFC of chloroprene IRIS assessment
- March to June 2018 – Potential compliance test of RTO
- May 2018 – 2 years of ambient data collected
- August 2018 – 2014 NATA release planned

Appendix Slides

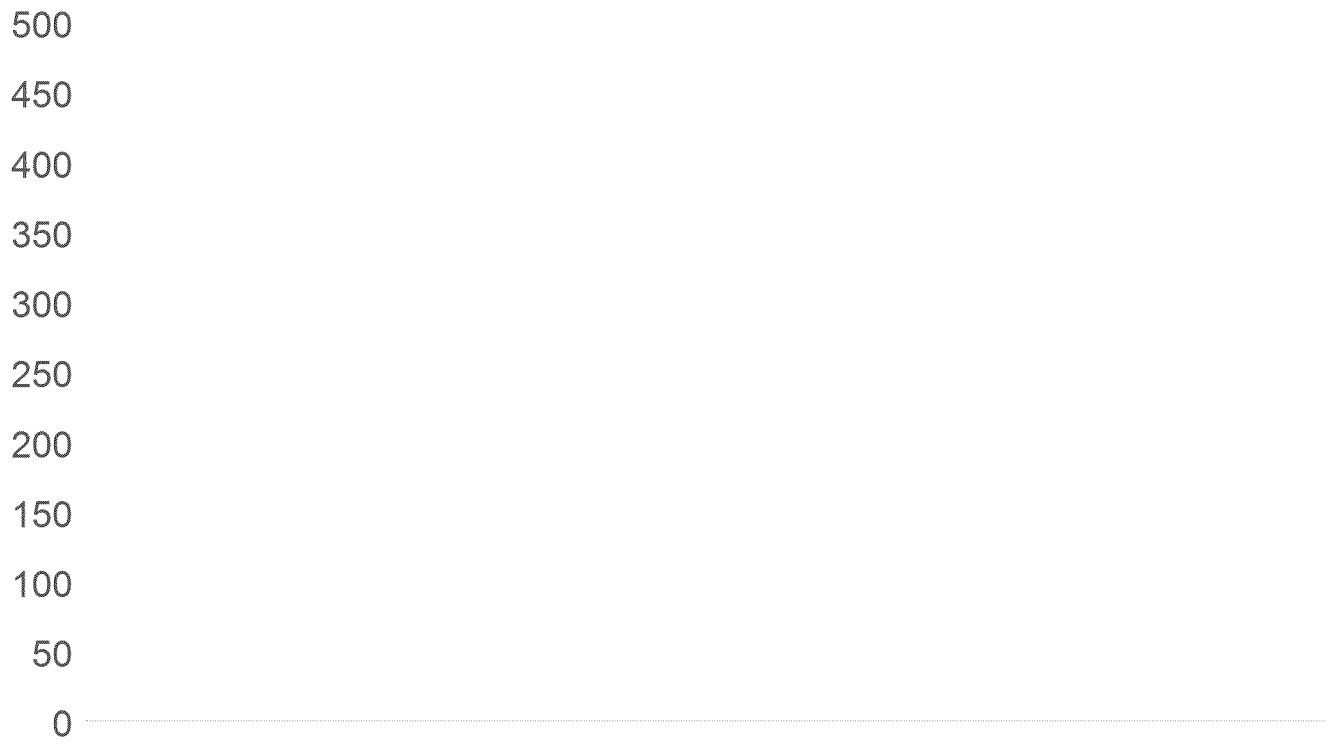


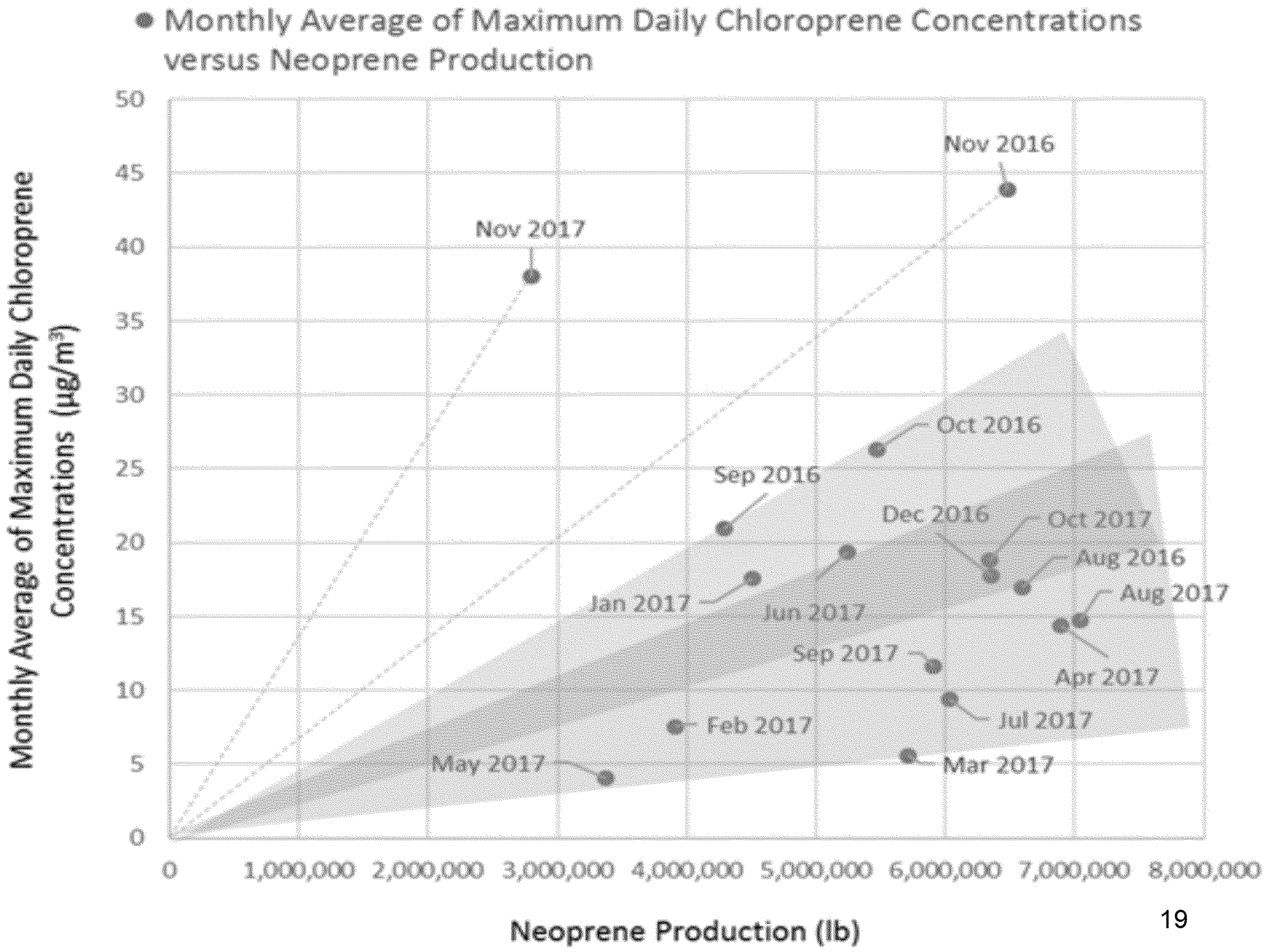
Neoprene chips (DPE's product)

Additional Background – Neoprene Production

- Neoprene Production is a Polymers & Resins I Source Category, with 1 facility. At the facility, there are also HON units, boilers, etc. Neoprene production emission points include front- and back-end process vents, wastewater, equipment leaks, and raw material storage.
- The Neoprene production source category was regulated under two RTR actions. The first, finalized in December 2008, determined risks from Neoprene production were acceptable and provided an ample margin of safety, so there were no changes to the existing MACT. The second, finalized in April 2011, promulgated new MACT standards for back-end process vents, a previously unregulated emission source.
- The 8-year technology review will be due in 2016 for all emission sources except the back-end process vents, which is due in 2019.
- Chloroprene emissions included in these RTR assessments equaled 232 tpy. These emissions estimates were obtained from data collected from industry in 2004.
- There was not a URE for chloroprene at that time, so no cancer risks were calculated for chloroprene in these assessments.

Annual Chloroprene Emission Estimates from DPE (tons)




Monthly Average of Maximum Daily Chloroprene Concentrations versus Neoprene Production
Monthly Average of Maximum Daily Chloroprene Concentrations (µg/m³)
50
45
40
35
30
25
20
15
10
5
0
0
1,000,000
2,000,000
3,000,000
4,000,000
5,000,000
6,000,000
7,000,000
8,000,000
Neoprene Production (lb)
Nov 2016
Nov 2017
Oct 2016
Sep 2016
Dec 2016
Oct 2017
Aug 2016
Aug 2017
Jan 2017
Jun 2017
Sep 2017
Apr 2017
Jul 2017
Feb 2017
May 2017
Mar 2017

Additional Community Information

- 235 of 240 DuPont employees are now DPE employees
- 77% of DPE employees live in the “River” parishes, which are St. John the Baptist, St. Charles, and St. James
  - 138,000 people live in the River parishes; 47,000 in St. John
- In summer 2016, DPE reported monthly meetings with one of two community groups
  - Community Advisory Panel
  - Near Neighbors
- DuPont started these meetings, characterized as friendly
- Region 6 EJScreen report indicates 59% minority population within 3 miles of facility (state avg = 40%)